

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
4 August 2005 (04.08.2005)

PCT

(10) International Publication Number
WO 2005/070020 A2

(51) International Patent Classification: Not classified

(21) International Application Number:
PCT/US2005/002325

(22) International Filing Date: 24 January 2005 (24.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/538,682 23 January 2004 (23.01.2004) US

(71) Applicant (for all designated States except US): **THE REGENTS OF THE UNIVERSITY OF COLORADO** [US/US]; 201 Regent Administrative Center, 3 SYS, Boulder, CO 80309 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BUNN, Paul, A., Jr.** [US/US]; 630 Sundown Lane, Evergreen, CO 80439

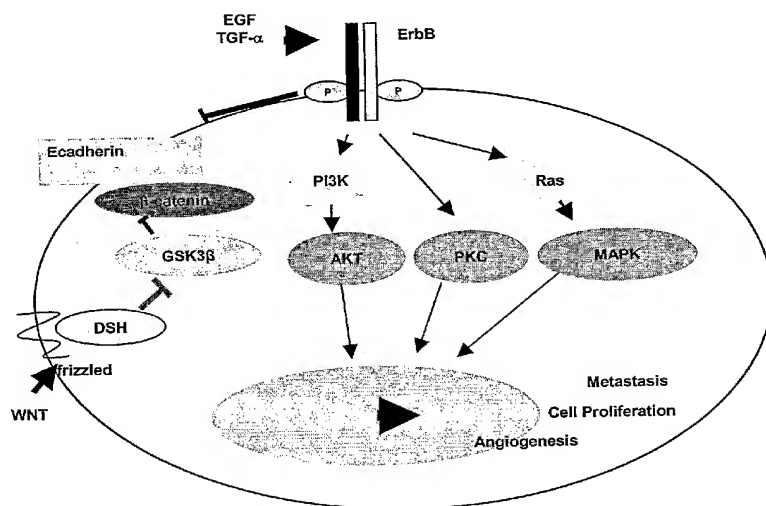
(US). **COLDREN, Christopher, D.** [US/US]; 2409 S.Dahlia Lane, Denver, CO 80222 (US). **FRANKLIN, Wilbur, A.** [US/US]; 245 S.Williams Street, Denver, CO 80209-2634 (US). **GERACI, Mark, W.** [US/US]; 5093 S.Hannibal Way, Aurora, CO 80015 (US). **GERACI, Mark, W.** [US/US]; 5093 S.Hannibal Way, Aurora, CO 80015 (US). **HELFRICH, Barbara, A.** [US/US]; 2447 S.Holman Circle, Lakewood, CO 80262 (US). **HIRSCH, Fred, R.** [NO/US]; 215 S.Rosemary Street, Denver, CO 80230 (US). **LAPADAT, Razvan** [RO/US]; 1366 Garfield Street, Apt.205, Denver, CO 80206 (US). **SUGITA, Michio** [JP/US]; 6975 S.Ogden Court, Centennial, CO 80122-1370 (US). **WITTA, Samir, E.** [US/US]; 1197 S.Monaco Parkway, Denver, CO 80224 (US).

(74) Agents: **CONNELL, Gary, J.** et al.; Sheridan Ross P.C., 1560 Broadway, Suite 1200, Denver, CO 80202-5141 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,

[Continued on next page]

(54) Title: GEFITINIB SENSITIVITY-RELATED GENE EXPRESSION AND PRODUCTS AND METHODS RELATED THERETO



(57) Abstract: Disclosed is the identification, provision and use of a panel of biomarkers that predict sensitivity or resistance to gefitinib and other EGFR inhibitors, and products and processes related thereto. Specifically, a method is described for selecting a cancer patient who is predicted to benefit from therapeutic administration of an EGFR inhibitor, an agonist thereof, or a drug having substantially similar biological activity as EGFR inhibitor. Also described is a method to identify molecules that interact with the EGFR pathway to allow or enhance responsiveness to EGFR inhibitors, as well as a plurality of polynucleotides or antibodies for the detection of the expression of genes that are indicative of sensitivity or resistance to EGFR inhibitors, an agonist thereof, or a drug having substantially similar biological activity as EGFR inhibitors. A method to identify a compound with the potential to enhance the efficacy of EGFR inhibitors is also described.

WO 2005/070020 A2



MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

Published:

— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.